Name: ______________________________

GCSE (1 – 9)

Averages from Frequency Tables

Instructions

- Use **black** ink or ball-point pen.
- Answer all Questions.
- Answer the Questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The marks for each Question are shown in brackets
– *use this as a guide as to how much time to spend on each Question.*

Advice

- Read each Question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every Question.
- Check your answers if you have time at the end

1 The table shows information about the number of points scored in a game.

Points	Frequency
0	9
1	11
2	18
3	7
4	4
5	1

Work out the mean number of points per game.

…..........................

(Total for question 1 is 3 marks)

2 The table shows information about the number of goals scored in a game by a football team.

Points	Frequency
0	10
1	12
2	x
3	7
4 or more	0

The team scored a total of 55 goals.
Find the value of x.

…..........................

(Total for question 2 is 3 marks)

3 The table shows information about the number of goals a team scored in 38 games.

Points	Frequency
0	7
1	14
2	11
3	6
4 or more	0

(a) Find the median number of goals scored.

……………………………

(1)

(b) Write down the mode

……………………………

(1)

(c) Work out the total number of goals the team scored in all 38 games.

……………………………

(2)

(Total for question 3 is 4 marks)

4 Adam is measuring the heights in cm of his tomato plants.

Height (cm)	**Frequency**
$140 < h \leqslant 150$	7
$150 < h \leqslant 160$	10
$160 < h \leqslant 170$	15
$170 < h \leqslant 180$	19
$180 < h \leqslant 200$	9

(a) Estimate the mean height.
Give your answer correct to 1 decimal place.

....cm
(3)

(b) Explain why your answer to part (a) is an estimate.

....

....
(1)

(Total for question 4 is 4 marks)

5 The table below gives information about the time taken for 20 people to run 5 km.

Time (minutes)	**Frequency**
$15 < t \leqslant 20$	3
$20 < t \leqslant 25$	6
$25 < t \leqslant 30$	7
$30 < t \leqslant 40$	4

(a) Find the class interval that contains the median.

....minutes
(1)

(b) Work out an estimate for the mean time.

....minutes
(3)

(Total for question 5 is 4 marks)

6 Michael recorded the maximum temperature every day in September.

The table shows information about his results.

Temperature (°C)	**Frequency**
$14 < t \leqslant 18$	4
$18 < t \leqslant 20$	10
$20 < t \leqslant 22$	8
$22 < t \leqslant 24$	5
$24 < t \leqslant 28$	3

Calculate an estimate for the mean maximum temperature.

....°C

(Total for question 6 is 3 marks)

7 The frequency table shows the time taken for 100 people to travel to an event.

Time (minutes)	**Frequency**
$0 < t \leqslant 10$	14
$10 < t \leqslant 20$	16
$20 < t \leqslant 30$	23
$30 < t \leqslant 40$	29
$40 < t \leqslant 50$	12
$50 < t \leqslant 60$	6

(a) Find the percentage of people that travelled for more than 30 minutes to the event

.....................................%
(1)

(b) Find the class interval that contains the median.

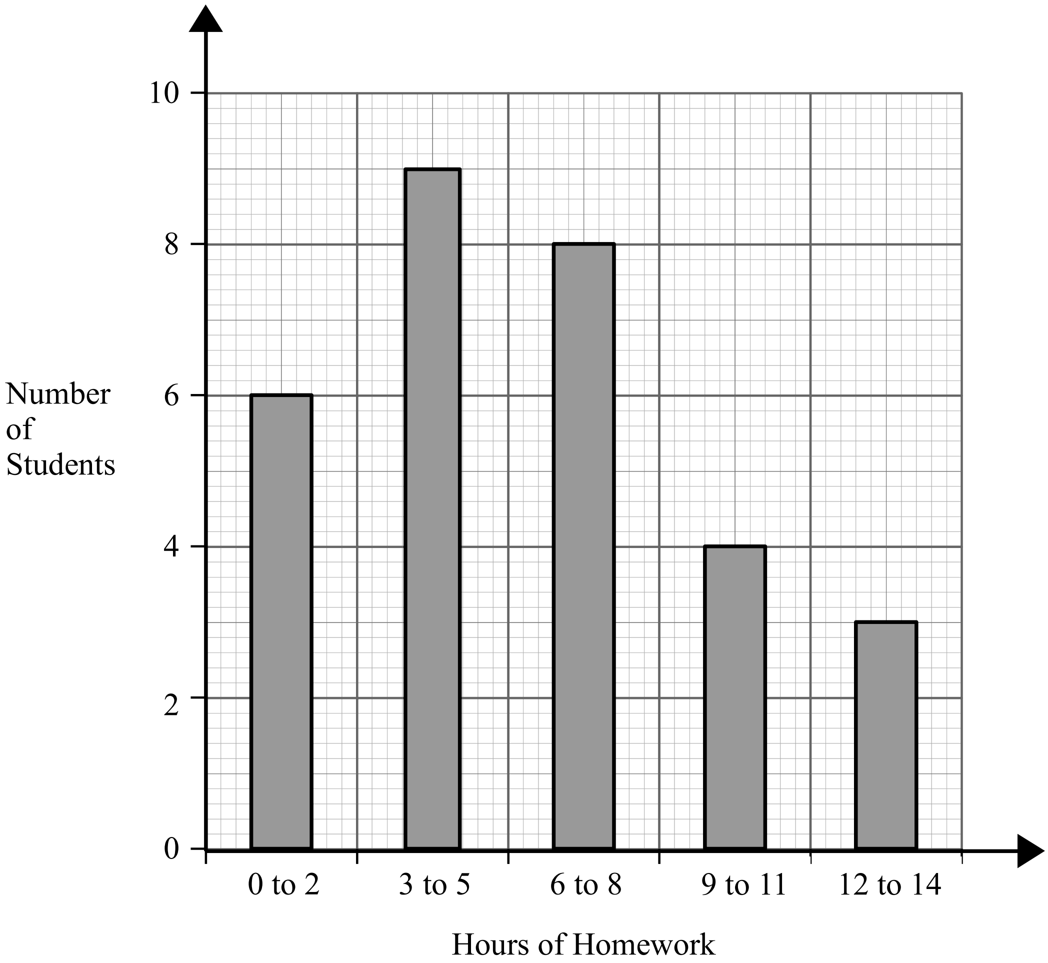
.... minutes
(1)

(c) Find an estimate for the mean time taken for people to travel to the event.

.... minutes
(3)

(Total for question 7 is 5 marks)

8 The bar chart shows how many hours of homework 30 students did last week.



Calculate an estimate for the mean number of hours of homework.

....… hours

(Total for question 8 is 3 marks)